

Transport and social exclusion in Western Sydney

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1 Introduction

Improving transportation in Greater Western Sydney has been a long standing issue frequently raised by residents and community groups in this, the third most populous, urban region in Australia. But what does it mean, and how can it best be achieved, are the questions that state and local government struggle to answer.

In NSW in the past year much media and public attention has been focussed primarily on two aspects of transport: the operation of existing transport systems and the environmental impact of increased road traffic resulting from urban growth. Two major government inquiries, the Parry Inquiry into Sustainable Transport and the Unsworth Review of Bus Services (NSW Ministry of Transport, 2003 and 2004) has thrown light on a public transport system in need of substantial investment for upgrading and reform.

At the same time the NSW Government has announced plans for extensive land release and urban renewal under the Metropolitan Strategy for Sydney to accommodate an expected population increase of around 40,000 people per year for the next 30 years. It is projected that 55% of this population growth will be housed in Western Sydney, a further 666,740 people in total by 2031 (DIPNR 2004).

The Government has prioritised large capital investment on transport and road infrastructure but concerns remain about the increasing number of cars and vehicle kilometres travelled generated by such urban growth exacerbating air pollution and greenhouse gas emissions, and in turn the impact on public health (Jalaludin, 2004 and Morton, 2002) and climate change (McManus, 2004).

In all of this discussion and debate about transport efficiency, reliability and environmental sustainability somewhat less attention has been given to the social dimensions of transport provision. In a comprehensive review of research literature on transport disadvantage and social status Dodson et al (2004) find a general lack of research attention to these concerns and that there is no definitive work on the issue in Australia. There is, however, sufficient evidence to show that the inequitable distribution of public transport services across urban areas has a disproportionately adverse affect on lower income households. Moreover, where transport provision is poorer and reliance on private motor vehicles is greater in outer urban areas lower income households have reduced access to employment and other services as well as bear an increased burden of transport costs.

It is timely, therefore, to undertake a systematic analysis of the relationships between transport provision and socio-economic and socio-spatial outcomes in the urban context. This paper presents the findings of a joint research project that attempts to do this, with a focus on western Sydney.

The research demonstrated that there is no clear-cut east-west divide in the distribution of public transport services in Sydney, nor is there a simple relationship between transport provision and the spatial distribution of social disadvantage. Instead, when transport service provision and social disadvantage were considered in tandem, the research found that the disadvantaged groups living in areas with limited transport services are disproportionately represented in Western Sydney. I argue, therefore, that a more holistic approach to transport planning and provision is required to ameliorate existing inequities and make progress towards a more socially sustainable system. Such an approach would place peoples' travel

needs, those that support and improve the well being of families and communities, as the starting point to transport planning.

1.1 Outline of the paper

In this paper I will firstly explore in more depth the conceptual basis and policy context for the research, and then outline the methodology applied in the research. I will present a brief overview of Western Sydney and current transport provision in the region. I will follow this description with the results of the empirical analysis on the distribution of transport related social exclusion across Sydney and the findings from our focus groups with different population groups in transport disadvantaged areas and suggestions about how transport could be improved for them. I will conclude by revisiting the conceptual framework with reflection from the findings.

1.2 Background to the research and acknowledgements

This research was conducted as a partnership between the University of Western Sydney and the Western Sydney Community Forum, a peak association supporting and resourcing non-government community service organisations across the Western Sydney region.

The research had four main aims:

1. To define and operationalise transport social status measures in the Australian urban context, focussing first on the relationships between transport and social exclusion.
2. To test these measures through empirical analysis based on Sydney
3. To establish the incidence and distribution of transport related social exclusion in Western Sydney; and
4. To identify the implications this might have for transport planning and provision.

I am indebted to Joan Gennery, Regional Transport Development Worker at the Forum for raising these issues, for sourcing funding for the research and for her insights and assistance in the conduct of the research. Invaluable advice and assistance was provided by the Transport and Population Data Centre, the Australian Bureau of Statistics, the New South Wales Council of Social Services and the community organisations that helped to organise focus groups for the research.

2 Conceptualising transport related to social exclusion

2.1 Defining social exclusion

An examination of the literature on transport and social exclusion shows that the most substantial body of work has been done in the United Kingdom. There, addressing social exclusion is the central to the national government's welfare reform agenda. The government's Social Exclusion Unit (SEU) has considered various studies and conducted in-depth research on the importance of transport to enabling individuals and households to access social and economic opportunities, specifically work, education, health services, shopping and social contact. (Lucas, 2004).

The two key concepts in this body of work are that of 'social exclusion' and of 'accessibility'. The term 'social exclusion' is a more familiar social policy concept in the UK and Europe than in Australia, where it is used in contrast to the term poverty or low income. It refers to the cumulative and reinforcing effect on people or areas which experience a combination of linked problems such as unemployment, low skills, low incomes, poor housing, high crime,

poor health and family dysfunction (SEU 2003, 146). In Australia, a more familiar term is 'socio-economic disadvantage' to describe the experience of multiple disadvantage. The notion of social exclusion, here, tends to be understood as the structural factors that restrict people who are socio-economically disadvantaged from taking up opportunities to fully participate in society.

'Accessibility', as it is defined in the UK government strategy (SEU 2003, 1), is the degree to which people can get to key services at a reasonable cost, in reasonable time and with reasonable ease. The key services identified are access to work, access to learning, access to healthcare, access to food shops and access to social, cultural and sporting activities. Transport policy, planning and provision are understood as one of a set of factors that contribute to the accessibility of areas. In this sense, transport either facilitates or inhibits participation of disadvantaged groups of people in these essential activities. Improving accessibility within local areas is regarded as an important way to reduce social exclusion. Improving transport is one way of improving accessibility but it also involves locating and delivering services in ways that help people reach them.

2.2 Australian policy context

Analysis of the relationship between transport and social exclusion in urban Australia has been rather less well defined. The issues span at least three policy domains: social policy, urban and transport policy. Each policy domain however uses various definitions of the concept of accessibility and different sets of indicators to measure it.

In the social policy sense the concept of 'accessibility' has tended to be defined in terms of the two dimensions of (1) **personal mobility** (physical ability or disability and access to private vehicle) and (2) **affordability** (the cost of transport expenses as a proportion of income). The prevailing discourse shifted from identifying "disadvantaged groups" in the late 1980s within social justice principles to managing "disadvantaged areas", exemplified by the work of Professor Tony Vinson (1999, 2004). Recently there has also been some recognition of increasing socio-spatial polarisation within cities (Randolph, 2004). In such studies, however, the availability and accessibility of public transport has not been considered.

The most commonly used indicator for identifying "disadvantaged areas" is the ABS Socio-Economic Index For Areas (SEIFA) within which the only transport related variable is the percentage of dwellings within an area with no motor cars (ABS 2001). Public transport, on the other hand, has tended to be considered as a service in its own right, and access to public transport as one of a number of services as a measure of locational disadvantage, rather than as a *means* to access services and facilities.

A similar tendency emerges in the urban policy literature, where definitions of accessibility also emphasise **proximity** as a main criterion. From an urban planning perspective accessibility is the ability to do a range of activities with the minimum of travel. As a policy objective, accessible urban planning integrates land use and transport. It aims to locate services (including public transport) and facilities close together to reduce the need to travel, reduce car use (number and length of trips) and encourage cycling and walking and the use of public transport. The influential work of Newman and Kenworthy (1999), which argues that increasing higher density housing (of at least 15 dwellings per hectare), particularly around transport interchanges, facilitates the viability of urban transport systems and reduces car usage, has largely been adopted as the mantra for new urban developments. This is reflected in higher density urban renewal developments around train stations in Sydney (DIPNR 2003) and a greater housing mix being planned for new release areas.

While urban density and proximity of services and facilities may reduce car dependence, they do not necessarily improve accessibility to services and facilities for people who are socially excluded. Indeed the evidence of socio-spatial polarisation within Sydney shows

greater concentration of disadvantage in areas not well serviced by public transport routes (Gleeson and Randolph, 2001).

In NSW transport policy accessibility is described mostly in terms of physical access to transport modes. This includes funding for train station upgrades to install lifts at locations serving higher passenger numbers, to improve physical access to platforms, and purchasing low floor buses. Transport provision, particularly for planning bus routes, emphasises **proximity** of stops to population, distance between stops and **frequency** of service as the essential components of minimum standard service delivery.

Transport for socio-economically disadvantaged groups is considered separately as “community transport.” Community transport programs are funded largely by other agencies, mainly Department of Ageing and Disability, and identify target groups based on three main criteria: mobility (physical ability), isolation, and age based (elderly, children or young people). Affordability issues tend to be considered in the narrow sense of the cost of fares for single and return trips, and has, to date, been addressed through providing a variegated bunch of fare concessions.

Thus, across the policy domains there is a blurred distinction between “transport disadvantaged” people (those who have personal mobility restrictions, and/or no access to a private motor vehicle and/or live in areas with few public transport options) and “transport disadvantaged” areas (those areas where there are few public transport options).

In order to examine the relationship between transport and social exclusion it is, therefore, necessary to look at the transport service levels and the travel needs and mobility restrictions of the population together.

Key transport indicators, however, focus on trips and travellers, such as number of trips, purpose of travel, number of trips by mode and total kilometres travelled by mode. Measures of how well transport meets the needs of transport disadvantaged groups, or affects accessibility of areas and services are lacking. Similarly, there is a lack of analysis of ‘journeys not taken’ because of the transport related dimensions of accessibility. As Bricknell et al (2004) note, there is a vast array of data on transport but the emphasis is on inputs (numbers of buses, trains, passengers) and outputs (number of trips, on time running distances), rather than the efficacy of transport systems for people’s wellbeing.

3 Methodology

In order to grapple with this multi-dimensional issue a multi-layered approach was adopted.

Firstly, the research applied geographical information systems (GIS) to determine the spatial distribution of public transport networks across the Sydney urban region. Statistical analysis of 2001 Census data was then incorporated to examine the population characteristics of the areas with more or less public transport, to identify specific social groups within areas with less public transport likely to experience social exclusion and to describe the incidence of transport-related social exclusion in Western Sydney, in comparison to the rest of the Sydney urban area.

Having identified transport-excluded locations, and disadvantaged groups residing within these areas, through empirical methods, qualitative investigation was then undertaken using focus groups to explore travel needs, experiences and the impact of transport on the daily lives of these groups of people in these areas.

3.1 Study area

Western Sydney is a subset of the Sydney urban region. It is generally understood to comprise 14 local government areas (LGAs). The region's most easterly LGAs, Bankstown and Auburn are situated roughly 15km west of the Sydney CBD and the western LGAs extend beyond 70km.

In order to gauge the distribution of transport provision and social exclusion of areas in Western Sydney in comparison to the rest of Sydney it was necessary to use data across the whole of the Sydney urban area. The Sydney urban area is bounded by the suburbs of Palm Beach and Berowra in the north, Riverstone the north-west, Cronulla and Heathcote in the south, Camden in the south-west and Falconbridge in the west. This area is comparable with that found in the ABS 2001 Sydney Social Atlas (ABS 2002) and the geographic areas used in the study are Census Collection Districts (CDs).

While Western Sydney LGAs, and their communities, extend beyond the boundaries of the Sydney urban area, the study area was limited by the available data. Therefore no data was available for Wollondilly Council in the south west, or for areas of the Blue Mountains City Council beyond Falconbridge and Hawkesbury City Council beyond Riverstone.

3.2 Transport network data

The GIS data of the spatial distribution of public transport systems was prepared by Athina Pascoe-Bell at the Transport Population Data Centre. The distribution of transport provision used ABS collection districts as the geographic unit.

A "transport disadvantaged collection district" was defined as "a collection district that was not within 800m of a high frequency transport node. A high frequency transport node was defined as "a bus stop or train station that was serviced at least every 30 minutes between 8.30am and 3.30pm on weekdays".

Although there may be many degrees of transport service frequency across different times of the day and greater or less distance to stops that could be used to determine transport provision, as a baseline for this research this definition was useful starting point and the provision of the data gratefully acknowledged. Thus, in this research it was not possible to use a gradient of transport service provision but simply a binary measure of whether an area was within walking distance of a high frequency transport stop or not. Those collection districts not within walking distance of a high frequency transport stop can be described as "transport disadvantaged areas."

4 Transport disadvantaged groups

It was not possible, in the scope of the research to examine transport issues for all groups of people who might experience mobility restrictions. Among the groups of people who are more likely to be both socio-economically disadvantaged and have transport or mobility restrictions, three groups of people were identified for the focus groups. These groups were older women, sole parents and young unemployed people. The objectives of the focus groups were to uncover the various travel needs and transport experiences of these groups in these areas to investigate the impact that transport has on their lives.

4.1 Older women

Older women were identified as they are less likely to have a drivers licence and more likely to be dependent on public or community transport. Less than 50% of women over 65 years of age do not have a driver's licence, compared to more than 80% of men over 65 years who

do. The majority of the population over 65 years of age are women, who often outlive their partners and then live alone into their eighties.

Older women living alone, then, are more likely to experience social exclusion and those that live in areas with poor transport accessibility are likely to be experiencing difficulty with the activities that enable them to continue to live independently, including doing shopping, getting to health services and engaging in social activities.

4.2 Sole parents

The majority (88 %) of lone parents are women and are over represented among low income households. With federal government welfare reform objectives aimed at sole parents re-entering the workforce when their children start school, the transport options available to them will likely have an important influence on their opportunities for finding work.

4.3 Young unemployed people

Young unemployed people are less likely to own a vehicle and, with less income, find the cost of transport a greater burden in trying to secure employment. Research by Hulse and Randolph (2004) found that the cost of transport was a major disincentive to finding work. Of their survey of unemployed people, 60% considered transport costs were a major inhibitor to working.

In 2001 the general unemployment rate in Western Sydney was 7.4%, slightly higher than the Sydney rate of 6.1%. The highest unemployment rates were in Fairfield (12.7%) and Auburn (11.9%). The unemployment rate for younger people, 15 to 24 years, however, was much higher in Western Sydney than the general rate. The unemployment rate for this age group was 15.9% in 2001 and accounted for 42% of all unemployed people in the region (ABS 2002). This compares to an unemployment rate of 10.7% for this age group across Sydney as a whole.

5 Transport in Western Sydney: an overview

The Western Sydney region is home to more than .6 million people, which represents 42% of the total population of Sydney. Western Sydney covers an area of approximately 6,400 square kilometres. Distances between centres in the region are large. Distances from Parramatta CBD to centres on the fringe in Penrith and Campbelltown are greater than 40km. LGAs with projected high population growth, Liverpool and Blacktown and the new centre at Rouse Hill are each around 20 km from Parramatta.

Rapid urban growth in Western Sydney in the past half-century outpaced the expansion of the public transport network in the region (Ministry for Transport 1998). This growth has been accompanied by changes to the nature and location of employment (Fagan, Dowling and Langdale, 2004), housing and lifestyles (Gwyther, 2002).

During this time planning decisions favoured road over rail. The City Rail network includes eight lines, 301 stations and covers 2,080 kilometres of track (Transport NSW, 2003). As a blunt indicator of distribution of coverage, only 19% of these train stations are located in Western Sydney. As a result, Western Sydney has higher levels of car ownership than the rest of Sydney because residents have had to rely on the private car as their main mode of transport.

In 2001 in Western Sydney 45% of households have 2 or more cars, whereas in the rest of Sydney Statistical Division 37% of households have 2 or more cars (UFP 2003). Car dependence in Western Sydney is most noticeable in areas where there is limited access to rail, such as in the northwest LGAs of Baulkham Hills, Blacktown and Hawkesbury, and in the western parts of Fairfield, Liverpool and in Camden in the southwest.

This dependence on the car for travel within the region is reflected in the high levels of traffic congestion and lengthy travel times described in the extensive work on transport in the region by Battlelino and Stone (2003). It is also reflected in the higher rates of death and hospitalisation due to road accidents. Between 1999 and 2001 there were 19.2 deaths per 10,000 residents in Western Sydney LGAs compared to the rest of Sydney where there were 14.0 deaths per 10,000 residents (WSAHS 2003).

Expenditure on transport by households in the region is also higher than the Sydney average, most likely related to the higher rates of households having more than one motor vehicle as well as to the greater distances travelled.

5.1 A word about affordability: Transport Poverty in Western Sydney

The scope of the project did not allow for an in-depth investigation of affordability issues, although these were explored in the focus groups. With rising petrol prices and the greater distances travelled within the Western Sydney region, affordability of transport will likely have an increasing impact on household budgets and individuals, creating an added dimension of social exclusion, that of transport poverty. Some research evidence is already available which provides and insight into this issue.

Gleeson and Randolph (2001) define transport poverty as what occurs when a household is forced to consume more travel costs than it can reasonably afford, especially costs relating to motor car ownership and usage. The ABS figures for average weekly household expenditure for 1998-99 (ABS 2000) show that expenditure on transport across Western Sydney was highest in the outer south western statistical subdivisions. Households were spending an average of \$169.00 per week on transport almost double that by households in the Central western Sydney subdivision who were spending \$86.77 per week. This amount represented 20.2% of the average total weekly expenditure by households in south western Sydney compared to 12.8% of household expenditure in central western Sydney. This was a greater proportion than that being spent on housing (16%) or on food (17.5%)

6 Transport and social exclusion in Western Sydney

The overview of the patterns of transport provision and use in Western Sydney serves as a backdrop for how transport might impact on social exclusion in the region, and how it might differ in its impact from the rest of Sydney. The empirical part of the research concentrated on the spatial distribution of transport disadvantaged areas and on identifying transport disadvantaged people within these areas.

6.1 Transport disadvantaged areas across Sydney

The geography of transport disadvantage shows the multiplicity of the various elements of the concept. Proximity to public transport covers a central area of the Sydney urban area, while transport disadvantaged areas extend around the circumference of this area. There is no apparent east-west divide between what could be described, using Cheal's (2003) terminology, as "transit rich" and "transit poor" areas as shown in **Figure 1**.

The distribution of social disadvantage, however, using the socio-economic index for areas (SEIFA), dissects the two regions from south-east Sydney to the north-west and forms a semi-circular segment fanning out to the south-west (Randolph and Holloway, 2004) as shown in **Figure 2**.

The distribution of households without motor vehicles on the other hand, displays a more linear pattern, following the rail lines from a high concentration in the inner Sydney area, with dispersed pockets in outer areas as shown in **Figure 3**.

The social and demographic composition of each of these geographically overlapping elements of transport disadvantage was further explored to identify socially disadvantaged groups who are affected by a lack of public transport infrastructure.

6.2 Distribution of transport disadvantaged areas

Using the criteria proposed by the Transport Population Data Centre for a transport disadvantaged Collection Districts, calculations were made on the coverage and population of the transport disadvantaged areas as shown in **Table 1**. The total area covered by collection districts not within 800m proximity of a frequently serviced transport node was calculated at just over half of the total Sydney urban area. Almost 60% of this area was located within Western Sydney LGAs.

Just over a third of the population of the Sydney urban area lives in these transport disadvantaged collection districts. That is, roughly 1.2million people in Sydney's urban area have limited access to public transport outside of peak hours. Again, Western Sydney has a greater share with 60%, some 700,000 people living in the transport disadvantaged areas in Western Sydney LGAs.

Table 1: Area and population of Transport Disadvantaged Collection Districts (CDs) in Sydney Urban Area

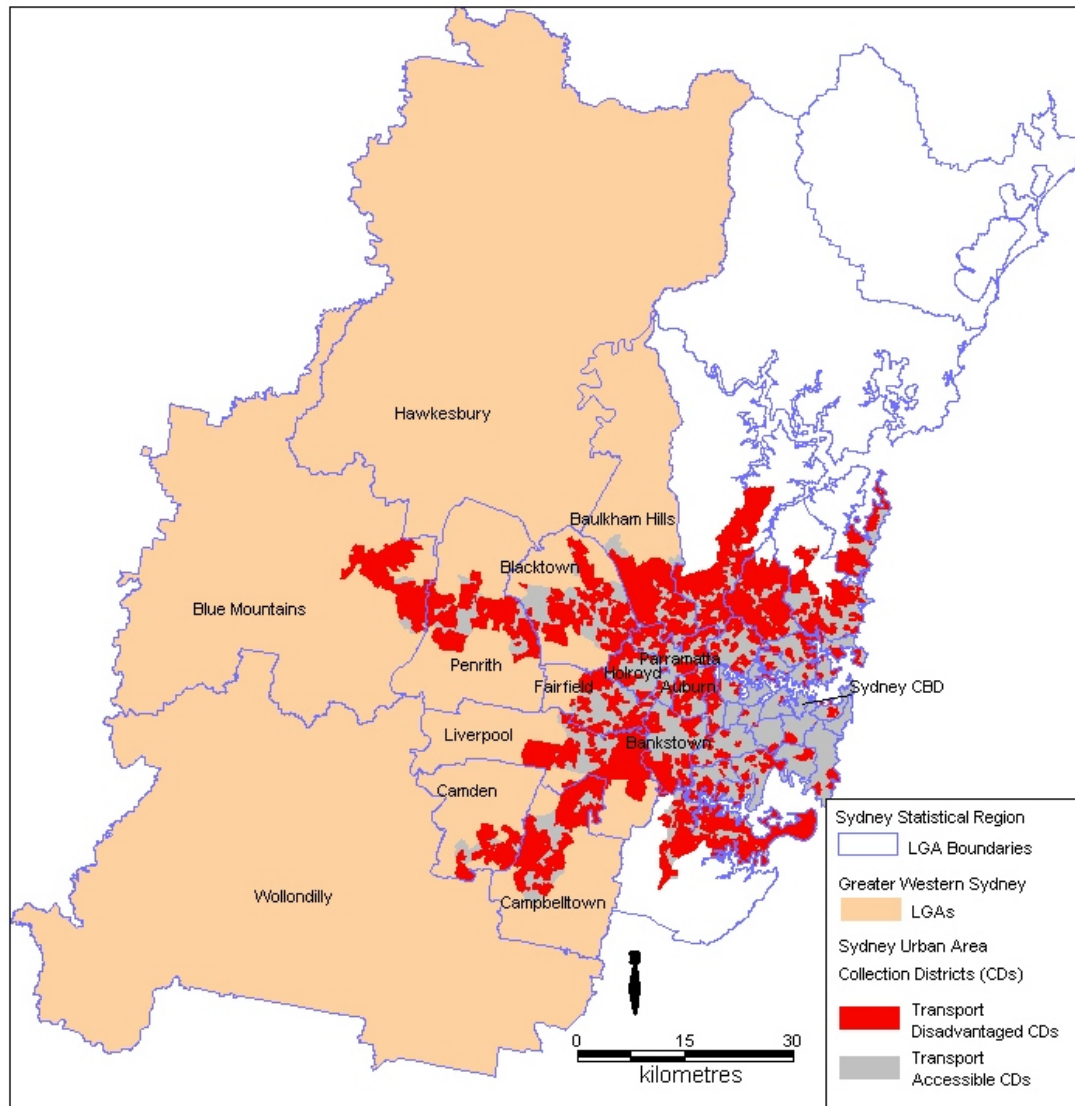
	Total area of CDs (sq km)	Number of persons in CDs
Sydney urban area (total)	1,687.4155	3,502,301
Transport disadvantaged CDs in Sydney urban area	908.4973	1,203,078
Transport disadvantaged CDs as a percentage of total CDs in Sydney urban area	53.84%	34.35%
Transport disadvantaged CDs in Western Sydney	544.5594	700,076
Transport disadvantaged CDs in Western Sydney as a percentage of transport disadvantaged CDs in Sydney	59.94%	58.19%

Source: ABS 2001 Census data, Transport Population Data Centre.

The distribution of transport disadvantaged areas across Western Sydney region echoed the broader trend with inner LGAs Parramatta and Holroyd have fewest areas and outer LGAs having the largest areas. Over 75% of the total population of Camden LGA were living in transport disadvantaged areas, followed by Penrith and Baulkham Hills, which along with Hornsby and Sutherland Shire in the rest of Sydney had over 50% of their population living in

transport disadvantaged areas. The distribution of transport disadvantaged areas is shown in **Figure 1**.

Figure 1



Sydney Statistical Division showing transport availability in Collection Districts (CDs) within the Sydney Urban Area.

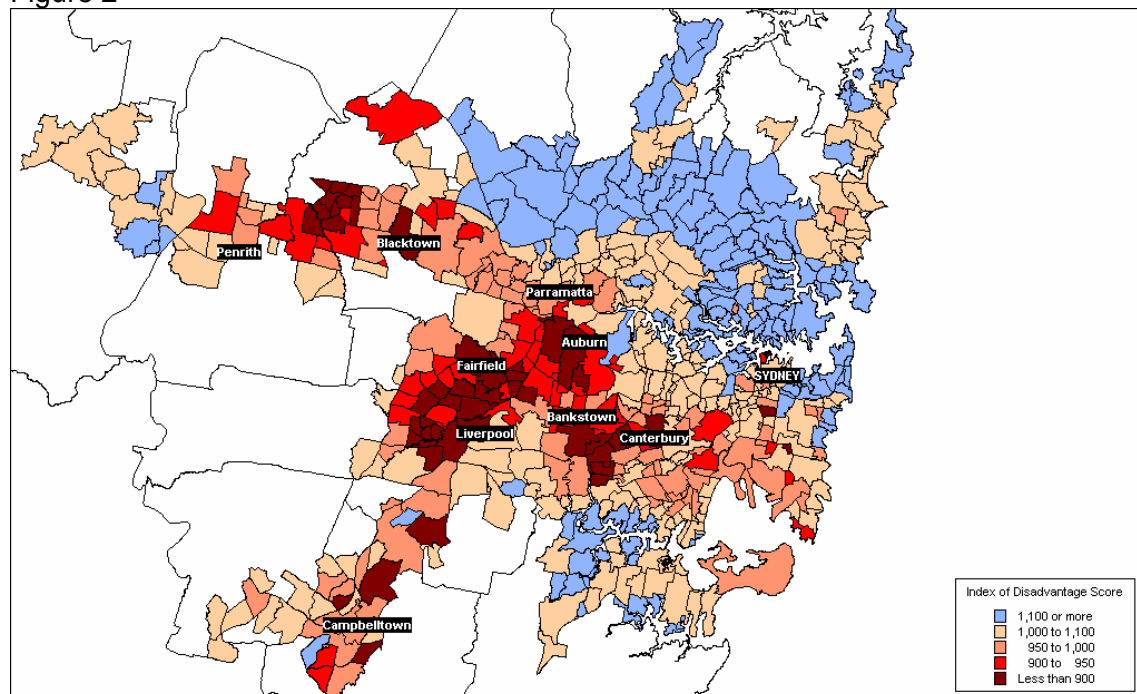
Source: ABS Census data and Transport Population Data Centre.

7 Distribution of social disadvantage

Using the ABS Socio-economic Indexes for Areas (SEIFA) (ABS 2003) the distribution of areas of most severe disadvantage are to be found in Western Sydney LGAs, with the exception of the adjoining south west LGA of Canterbury, as shown in **Figure 2**. The concentrations of disadvantage in outer areas of Campbelltown and Penrith overlap with areas of transport disadvantage in these LGAs. This is not so clearly the case in Fairfield, Canterbury and Auburn where the number of socio-economically disadvantaged areas has expanded since 1996 (Randolph and Holloway, 2004). The influence of transport as a factor in social disadvantage, and a contributor to social exclusion, is, therefore, not consistent. On the other hand, attempts to address social exclusion across a range of locations identified as

disadvantaged but without reference to transport issues would equally lead to inconsistent outcomes.

Figure 2



Index of disadvantage by suburb, Sydney, 2001

Source: ABS Census 2002 SEIFA Index, Randolph and Holloway (2004)

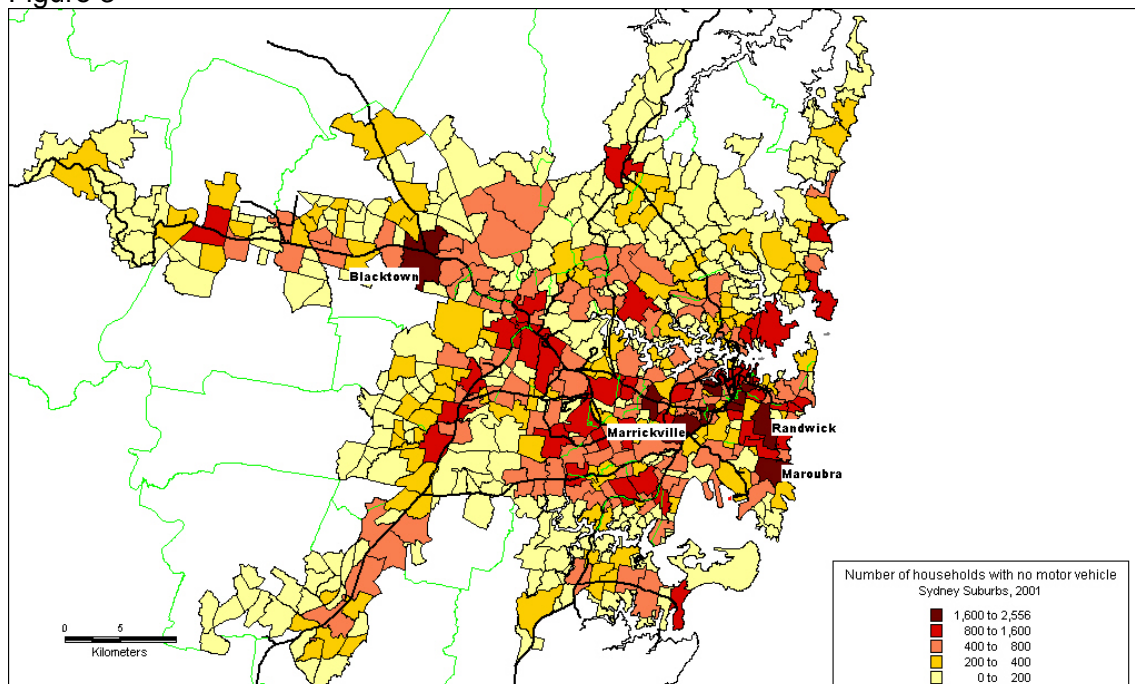
7.1 Access to private transport and vehicle disadvantage

As one might expect, the corollary of the high rates of car ownership in Western Sydney is that the proportion of households with no motor vehicle, at 10.9% in 2001, is lower than in the rest of Sydney SD where 14.5% of households had no cars (WESTIR, 2003). However, this still constitutes a sizeable number of almost 60,000 households, (59,107) households, with no motor vehicle.

The 2001 Sydney Social Atlas produced from Census data by the ABS shows that in Sydney the percentage of dwellings with no motor vehicles decreased as the distance from the city increased. It suggests that low car ownership was also associated with proximity to railway lines and accessibility to public transport routes (ABS 2001). Dwellings with no motor vehicles were concentrated in Sydney's inner south; within 5 kilometres of the city centre; in suburbs around North Sydney; Randwick and Maroubra to the south; Manly and Bondi on the coast. These areas had high percentages of people with university qualifications, dual income families without children and white-collar workers. Areas with high percentages of dwellings with no motor vehicles featured low ratios of couples with dependent children and home ownership.

This pattern is partially replicated in Western Sydney with LGAs closest to Parramatta CBD and suburbs adjoining the rail stations having higher proportion of households without vehicles. Auburn, Holroyd and Parramatta LGAs had the highest proportions of households who did not own a motor vehicle (more than 17 per cent of households). In contrast to inner Sydney, however, outer suburbs in the west and south west with high percentages of dwellings without motor vehicles tended to be low income areas with high percentages of people without qualifications and unemployed people (ABS 2001) as shown in **Figure 3**.

Figure 3



Number of households with no vehicle, Sydney suburbs, 2001

Source: ABS 2001 Census CData 2001.

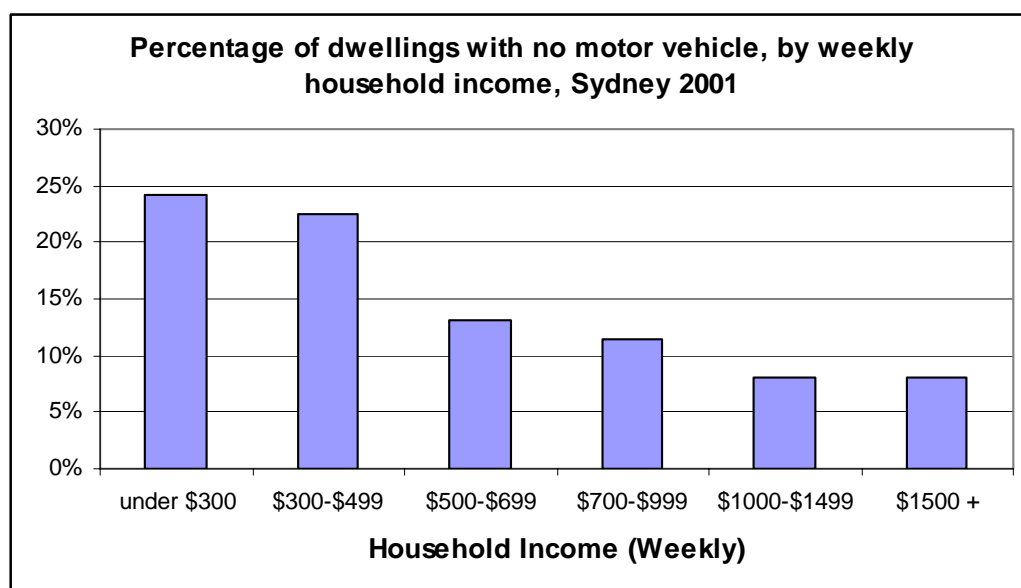
Two conclusions that could easily be drawn from this spatial pattern is that firstly, living in close proximity to public transport is associated with reduced car ownership, complicating the connection between lack of car ownership and social disadvantage; and secondly that households with dependent children are more likely to own a vehicle, or less likely to be vehicle disadvantaged.

To investigate the characteristics of households with no vehicle, rather than just their spatial correlates, cross-tabulations of 2001 census data were conducted between vehicle ownership and household income and between vehicle ownership and household type.

7.1.1 Households with no vehicle and household income

Within Sydney urban area the proportion of households with no vehicle is highest among low income households and declines as income rises as shown in **Figure 4**. Almost a quarter of households (24.2%) with the lowest weekly income (under \$300 per week) have no vehicle whereas 8% of households on high weekly incomes (over \$1500 per week) have no vehicle. This supports the social policy perspective that lack of access to a private motor vehicle is a factor in social disadvantage.

Figure 4

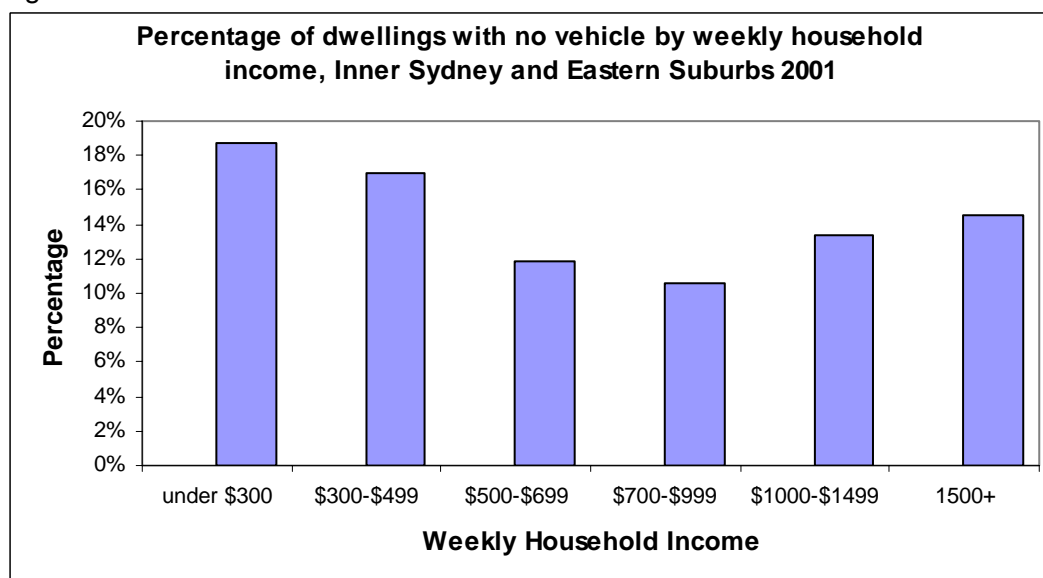


Percentage of private dwellings with no motor vehicle, by weekly household income, Sydney urban area, 2001.

Source: ABS Confidential Unit File Records. 2001 Census Sample.

However, examining the inner Sydney and Eastern Suburbs data separately shows that, although proportion of households with no motor vehicle remained the highest for the lowest income households, there was an increase in the proportion of households with no motor vehicle as household income rose above the mean of around \$700 per week as shown in **Figure 5**.

Figure 5



Percentage of private dwellings with no motor vehicle by weekly household income for inner Sydney and Eastern Suburbs, 2001.

Source: ABS Confidentialised Unit Record Files, 2001 Census Sample file.

This suggests that in areas with higher transport accessibility, vehicle ownership, or lack of it, is a less reliable measure of social disadvantage, highlighting the importance of the spatial dimension to social policy.

On the issue of affordability, the distribution of car ownership across all income bands shows that more than half of all households in Sydney with incomes below \$700 per week have at least one car and therefore, bear the associated costs.

7.1.2 Households with no vehicle, household type and household income

On the issue of household type, the assumption that families are more likely to own a vehicle than households without children is not supported. Car ownership rates for family households increase as income increases, but the relationship is not so clear for lone person households in Sydney. Almost 70% of family households with at least one motor vehicle have incomes above \$700 per week the vast majority with incomes above \$1000 per week. At the other end of the income scale, less than 10% of family households with a vehicle had incomes below \$500 per week. In contrast car ownership for lone person households was spread across the income bands. Only a quarter (25.7%) of lone person households with a vehicle had incomes above \$1,000 per week (ABS 2001 Census Customised tables).

The spatial analysis of vehicle ownership rates underlines the composite nature of transport disadvantage for people. In short, transport related social exclusion will have the most impact on families and individuals with low incomes and no motor vehicle, living in areas with poor public transport provision.

8 Distribution of socially disadvantaged groups

8.1 Older women

The proportion of the people living alone aged 65 years and older in Western Sydney is 36.7%, which is much the same as in Sydney generally (36.5%). Within Western Sydney the areas that tend to have higher proportions of older people are those that have been established longest and tend to be closer to the urban centres nearer railway stations such as Blacktown and Fairfield. However, the ageing of populations away from rail transport, particularly in Department of Housing estates is increasing the number of older people in transport disadvantaged areas.

8.2 Sole parents

One parent families are widely dispersed across the Sydney area but Western Sydney has a slightly higher proportion (16.6% of all families) than in the rest of Sydney SD (15%) and areas of particularly high concentrations in outer west and south west areas (ABS 2001). Campbelltown LGA has the highest proportion of one parent families (21.6%) while Blacktown has the highest number (12,741 families). Claymore and Airds in Campbelltown LGA, each recorded over 40% of families being lone parent families. These concentrations can be directly related to high proportions of government owned housing. One parent families represent more than half of all low income families (those earning less than \$400 per week) across the Western Sydney.

8.3 Young unemployed people

Although the distribution of unemployed 15-24 year olds was more widely dispersed than that for total unemployed people, it was particularly high in Parklea in Blacktown and Airds and Claymore in Campbelltown, where rates reached 39% or higher.

When considering unemployment in relation to transport and social exclusion, the geographic distribution of transport disadvantage and unemployment showed that just over three quarters (76.4%) of unemployed people with no vehicle, living in transport disadvantaged areas are to be found in Western Sydney. In trying to address the problem of transport related social exclusion, these areas in Western Sydney and these groups seem like a good place to start.

9 Travel need and transport experiences

Studies such as *Bankstown Transport Research Project*, (Bankstown City Council 2002), *Western Sydney Aboriginal transport focus groups*, (WSROC, 2002), *Transport needs and issues in the Macarthur Region*, (UFP 2000), and *Young people's barriers to accessing public transport in Western Sydney* (Western Sydney Community Forum, forthcoming) all report similar problems with transport:

- A lack of cross regional services within the local area, with particular concern about lack of services to hospitals and university campuses.
- Circuitous bus routes and long journey times
- Poor urban design of bus interchanges and areas around stations and bus stops making access difficult
- Lack of coordination of timetables between operators and between bus and train
- Infrequent (or non-existent) services especially at nights and weekends and unreliability of services
- High cost of fares, lack of the same concessions as on State transit Authority buses and generally confusing and inequitable concession fare regimes
- Ticketing issues such as a need for multi-modal ticketing, free transfers and discounted return fares
- Difficulties in accessing buses and railway stations and lack of amenities
- Lack of information on timetables and services
- Unsafe stations, stops and trains

(Western Sydney Community Forum 2003)

Such studies tend to focus on the problems with transport, rather than the problems for people associated with transport. In this study, however, we asked firstly, "What are the things you need to do on most days of the week?" This seemingly simplistic question exposed differences between groups in regard to their prioritised travel need.

9.1 Travel needs and priorities

Older women's travel needs included grocery shopping and getting to the doctor, as well as socialising at local clubs or visiting friends. Sole parent travel needs were perhaps most diverse including shopping, but also not surprisingly a lot of child-related activities, playgroups and support groups for families with children with special needs, volunteering, dropping off and collecting children from school, taking them to after school activities or casual employment and part-time study and work for themselves. Less frequent trips included taking their children to Darling Harbour during holidays. For young unemployed people, recreational and social activities were prioritised, like going to the movies to hang out at the shops. Trips to Centrelink or job centres were certainly not high on their list of priorities.

9.2 Travel experiences

Physical accessibility of transport was a recurring concern for the older women, and proximity of the transport node reflecting increasing physical disability with age. This included such things as buses with narrow aisles that made it more difficult for older people with walking sticks and were completely inaccessible for people in wheelchairs. Location of bus stops away from shopping mall entrances, buses with limited space for groceries and the distance from stops to home, were noted as making it more difficult to do the shopping, because as one woman described it, you end up with “looking like a gorilla because of the length of your arms from carrying the shopping bags to the bus stop from the shops and from the bus stop to home”. One solution discussed was to shop more frequently but this only increases the cost and reduces the money one has to spend on food. Taxis offer another solution but cost restricts how frequently the women would use this form of transport.

The transport difficulties experienced by older women were also related to their increased need to access health services. Although local doctor services may be accessibly located and only require a single mode trip, specialist care, outpatient hospital care, rehabilitation and palliative care services can be quite widely dispersed.

Poorly connected bus and rail services and affordability were a particular concern for sole parents needing to go further than the local shops. Travelling with young children is extremely tiring when waiting times are exaggerated because of missed or late connections between bus and train. Waiting times for taxis for local shopping trips are also lengthened for women with infants because there are fewer taxis equipped with baby capsules. For those trying to do study or work, fitting in these activities around school hours is extremely problematic if relying on infrequent public transport. One young mother in Claymore, pregnant with her second child has to catch three buses, with a two-year old in tow, to get to the Campbelltown Hospital for her weekly checkups. The road distance is about 6 and half kilometres.

The cost of transport is also of great concern for sole parents, even when eligible for concessions themselves the total cost of tickets for themselves and 2 or more children greatly inhibits the number of trips they make.

For the young people in the focus groups, safety and fear of crime emerged as the priority concern when discussing their travel experiences. This was largely, but not only related to wanting to go out at night and on weekends to the movies and socialise. Trying to get work in casual service industries like local fast food outlets also presents the same problems of getting home late at night and on weekends when the buses are few and far between.

9.3 Social outcomes of transport disadvantage

For older women, getting to health services and shopping is a priority, and the introduction of the pensioner excursion ticket has, in their words, “made a big difference”. Fewer services at night or weekends were not regarded as having a big impact on their lives. The introduction of courtesy buses at local clubs provides an avenue some to maintain their preferred social activities. Locating bus stops closer to the shop entrances and medical services and having opportunities for hail a bus and dropping off closer to home would help improve accessibility for this group.

For sole parents (and indeed couple family parents) without a car in transport disadvantaged areas, participating in activities such as taking their children to after school sporting or leisure activities is, as they describe it, “out of the question.” Their children then miss out on opportunities for extra learning, physical activity and the health benefits that flow from participating in sport and leisure activities. Having to access health services using public transport with sick children is extremely difficult and virtually impossible on weekends or at

nights, so often they rely on friends or neighbours with cars to assist. Managing to get to a range of activities is increasingly difficult the more times a change of transportation is necessary. As the woman expecting her second child said, "With the money I'll get for this one I'm either going to get my licence or a get a decent pram."

Young people in these areas like other young people might prioritise participating in social and recreational activities, but have few opportunities for entertainment in their local area and are limited by infrequent services and fears about personal safety to travel too far to take up other opportunities elsewhere. They would like to go to the city more often; they describe how boredom leads to antisocial behaviour. The group in Claymore described how the local preschool got burnt down as "proof of how bored the kids are around here."

10 Conclusion: towards a holistic concept of accessibility

The research suggests that poor transport provision has a compounding the effect on disadvantaged households. It highlights the importance of considering the spatial dimensions of social disadvantage in social policy as much as it emphasises the need to consider the social impacts on disadvantaged groups in transport planning.

It is evident that the concept of accessibility is, at least, a composite of the factors of urban accessibility, that is proximity to services and transport accessibility which includes factors such as availability (including frequency and punctuality), affordability and suitability to individual or activity. Being able to determine levels of accessibility within areas involves asking the "who, what, when and where" questions: "who lives in an area, what activities do they need to do, when do they need to do them and where do they need to go to do them?" This then in turn can inform action to reduce transport related social exclusion.

The strategic bus routes between centres, as proposed in the NSW bus reforms might well improve public transport coverage across Sydney. But as this study has tried to show, accessibility to services for different groups of people in transport disadvantaged areas will require different transport solutions. By exploring travel needs and transport experiences with various groups of people it is possible to get a glimpse of some solutions at the local scale.

Can the RSL courtesy bus idea be developed by council, local chambers of commerce with local fast food outlets to ensure safe travel for their young staff? Can there be a free shuttle bus around centres to key activity locations: TAFE, University, hospitals and shopping centres? What emerges from using a combination of methods is a construct of accessibility that comprises four sets of factors related to **people** and their travel needs, to **transport** and its frequency, reliability, suitability and affordability, to the **activities** that support health, wellbeing and redress social exclusion, and the **location** of the people relative to the transport and the desired destination.

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